

## Claims

What is claimed

- 1                   1. A device comprising:  
2                    an array of electrostatically activated members formed in a layer  
3 comprising silicon; and  
4                    a substrate comprising a ceramic material and including conductors  
5 formed on a major surface of the substrate and in via holes formed in the  
6 substrate, the conductors being positioned so as to selectively operate the array  
7 of members.
- 1                   2. The device according to claim 1 wherein the members are  
2 rotatable mirrors.
- 1                   3. The device according to claim 2 wherein 1 wherein the array is  
2 at least 8x10.
- 3                   4. The device according to claim 1 wherein the array is separated  
4 from the substrate by a spacer layer.
- 1                   5. The device according to claim 1 further comprising a layer of  
2 metal on a major surface of the silicon layer.
- 1                   6. The device according to claim 2 wherein the mirrors are adapted  
2 to rotate about at least two axes.
- 1                   7. The device according to claim 1 wherein the ceramic substrate  
2 comprises AlN.
- 1                   8. The device according to claim 1 wherein the substrate has a  
2 flatness of less than or equal to 10 microns.
- 1                   9. The device according to claim 1 wherein the substrate has a  
2 surface roughness of less than or equal to 1 micron.
- 1                   10. The device according to claim 1 wherein the conductors have a  
2 line width of less than 2 microns and a spacing less than 2 microns.

1 11. The device according to claim 1 wherein the conductors  
2 positioned to operate a member comprise an array of at least four conductors  
3 extending through separate via holes.

1 12. A device comprising:  
2 an array of at least 8x10 mirrors rotatable about at least two axes  
3 formed in a layer comprising silicon;  
4 a spacer layer formed over a surface of the silicon layer; and  
5 a substrate comprising a ceramic material comprising AlN having a  
6 flatness of less than or equal to 10 microns and a surface roughness of less than  
7 or equal to 1 micron including conductors formed on a major surface of the  
8 substrate and in via holes formed in the substrate, the conductors being  
9 positioned so as to selectively operate the array of mirrors, wherein the  
10 conductors positioned to operate a mirror comprise an array of at least four  
11 conductors extending through separate via holes.

1 13. A method of forming a device comprising:  
2 forming an array of electrostatically activated members in a layer of  
3 silicon; and  
4 mounting said silicon layer over a substrate comprising a ceramic  
5 material which includes conductors formed on a major surface of the substrate  
6 and in via holes formed in the substrate, the silicon layer being mounted so as to  
7 position the members with respect to the conductors to permit selective operation  
8 of the members.

9 14. The method according to claim 13 wherein the members are  
10 movable mirrors.

1 15. The method according to claim 13 wherein the silicon layer is  
2 mounted using an epoxy bond.

1 16. The method according to claim 13 wherein the silicon layer is  
2 mounted using a solder bond.

1 17. The method according to claim 13 wherein a spacer layer is  
2 included between the silicon layer and the ceramic substrate.